

# Sync & Move: Cooperative Rubber Band Challenge

Grade Levels: Kindergarten to Second Grade

Duration: 45 minutes

## Standards:

- Next Generation Science Standards (NGSS):
  - K-2-ETS1-1: Ask questions, make observations, and gather information about a situation people want to change to define a simple problem that can be solved through the development of a new or improved object or tool.
  - K-2-ETS1-2: Develop a simple sketch, drawing, or physical model to illustrate how the shape of an object helps it function as needed to solve a given problem.
- Common Core State Standards (CCSS):
  - CCSS.ELA-LITERACY.SL.K.1: Participate in collaborative conversations with diverse partners about kindergarten topics and texts with peers and adults in small and larger groups.
  - CCSS.ELA-LITERACY.SL.1.1: Participate in collaborative conversations with diverse partners about grade 1 topics and texts with peers and adults in small and larger groups.

## Objectives:

- Students will collaborate in small groups to synchronize movements in order to transport a tennis ball using a rubber band and strings.
- Students will communicate effectively with peers to strategize and problem-solve during the activity.
- Students will reflect on the teamwork process and discuss what worked well and what could be improved.

## Materials:

- Rubberbands
- Strings
- Tennis ball

- Markers or cones to establish starting and drop-off points

## **Procedure:**

### **Introduction (5 minutes):**

- Gather students and introduce the activity.
- Explain that students will work in small groups to move a tennis ball using rubber bands and strings.
- Establish the starting and drop-off points for the ball.

### **Group Formation and Instructions (5 minutes):**

- Divide students into small groups and distribute materials.
- Provide instructions on how to use the rubber bands and strings to move the tennis ball.

### **Activity (25 minutes):**

- Allow students time to work in their groups to experiment with the rubber bands and strings.
- Encourage communication and collaboration as students strategize and problem-solve together.
- Circulate among groups to provide support and guidance as needed.

### **Testing and Discussion (10 minutes):**

- After the activity, gather students for a discussion.
- Ask each group to share what worked well during the activity and any challenges they faced.
- Facilitate a reflection on the importance of teamwork and communication in completing the task successfully.

### **Conclusion (5 minutes):**

- Summarize key points from the discussion.
- Thank students for their participation and teamwork.
- Reinforce the importance of working together to achieve common goals.

## **Assessment:**

- Observation of students' collaboration and communication during the activity.
- Participation in group discussions and reflection on teamwork.

## **Extension:**

- Encourage students to experiment with different strategies for moving the tennis ball.

- Challenge students to design and build their own rubber band-powered devices for moving objects.